

IN THE CLAIMS:

Please cancel claims 31 and 42.

Please replace claims 1, 32, 33, 36-38, 49, 51-53 and 61 with the corresponding amended claims.

1. (Amended) A method of manufacture comprising:
- (a) producing raw nanostructure or nanotube-containing material comprising closed structures;
 - (b) purifying the raw material;
 - (c) processing the purified material thereby forming openings in the closed structures;
 - (d) introducing a foreign species comprising electron donors or electron acceptors into at least some of the openings; and
 - (e) closing the openings by forming passivation layers, thereby forming capsules filled with the foreign species.

32. (Amended) The method of claim 1, wherein the passivation layers are formed by dispersing the filled capsules in a solvent.

33. (Amended) The method of claim 1, wherein the passivation layers are formed by exposing the filled capsules to oxygen or an oxygen-containing gas.

36. (Amended) The method of claim 1, wherein the materials produced after step (d) have a chemical composition of A_xC where x is greater than 0 to 1, and A is the foreign species which comprises at least one of: Li, Na, K, Rb, Cs, Mg, Ca, Sr, Ba, Sc, Y, Fe, Co, Ni, Cu, or alloys thereof; a Lewis acid; halogen mixtures; metal chlorides; metal bromides; metal fluorides; metal oxyhalides; acidic oxides; and at least one of HNO_3 and H_2SO_4 .

37. (Amended) The method of claim 36, wherein the materials produced after step (e) have a chemical composition of A_xC where x is greater than 0 to 1, and A is the foreign species which comprises at least one of: Li, Na, K, Rb, Cs, Mg, Ca, Sr, Ba, Sc, Y, Fe, Co, Ni, Cu, or alloys thereof; a Lewis acid; halogen mixtures; metal chlorides; metal bromides; metal fluorides; metal oxyhalides; acidic oxides; and at least one of HNO_3 and H_2SO_4 .

38. (Amended) The method of claim 36, wherein the Lewis acid comprises halogen Br_2 , and the acidic oxide comprises N_2O_5 or SO_3 .

49. (Amended) A method of reducing electronic work function, reducing threshold field emission values, converting semiconducting behavior to metallic behavior, increasing the electron density state at the Fermi level, and increasing electron emission site density, of carbon nanotube-containing material, the method comprising:

(a) forming openings in the carbon nanotube-containing material;

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(b) introducing a foreign species comprising an alkali metal, an alkaline earth metal, a mixture of alkali metals, a mixture of alkaline earth metals, or a mixture of alkali and alkaline earth metals, into at least some of the openings; and

(c) closing the openings by forming passivation layers, thereby forming carbon nanotube capsules filled with the foreign species.

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51. (Amended) The method of claim 50, wherein step (c) comprises forming the passivation layers by dispersing the filled carbon nanotube-containing material in a solvent.

52. (Amended) The method of claim 49, further comprising:

(d) forming a field-emitting flat panel display element comprising, at least in part, the capsules.

53. (Amended) A method of manufacture comprising:

- (a) producing vertically oriented carbon nanotubes on a support surface;
 - (b) applying an insulating layer;
 - (c) opening tops of the nanotubes;
 - (d) introducing a foreign species into the open tops and into interior spaces of the nanotubes;
 - (e) closing the open tops of the nanotubes by forming passivation layers; and
 - (f) activating the filled nanotubes.
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61. (Amended) The method of claim 53, wherein step (e) comprises forming the passivation layers, thereby closing the open ends.

Please add new claim 71 as follows:

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71. (New) A method of manufacture comprising:
(a) producing raw nanostructure or nanotube-containing material comprising closed structures;
(b) purifying the raw material;
(c) processing the purified material thereby forming openings in the closed structures;
(d) introducing a foreign species comprising electron donors or electron acceptors into at least some of the openings; and
(e) closing the openings, thereby forming capsules filled with the foreign species having an electronic work function of less than 5 eV.